CLAIMS

1   1. A compression method comprising regulating compression of
2 serialized input data as a function of an in-progress measure of said
3 compression.

1   2. A method as recited in Claim 1 further comprising a step of:
2   a) converting a source image into a series of blocks, said series
3 including a first block, intermediate blocks, and a last block;
4   wherein, said regulating includes
5   b) determining a baseline target block size;
6   c) for each block in turn, determining a current target block size,
7 the current target block size for said first block being said baseline
8 target block size, the current target block size for said intermediate
9 blocks and said last blocks being equal to said current baseline
10 target block size plus an accumulating savings associated with the
11 preceding block in said series;
12   d) for each block in turn, selecting a compression mode
13 guaranteed to compress that block so that the resulting compressed
14 block fits its corresponding target block size as determined in
15 step c;
16   e) for each block in turn, compress the block using the
17 compression mode selected in step d to yield a corresponding
18 compressed block;
19   f) for each of said first and intermediate blocks in turn,
20 determine said accumulated savings in part as a function of the size
21 of the compressed block resulting from step e.

1   3. A method as recited in Claim 2 wherein step f involves
2 determining the size of the compressed block resulting from step e
3 and determining said savings in part as a function of said size.

1   4. A method as recited in Claim 2 wherein step *d* involves
2   analyzing the content of the block and selecting said compression
3   mode in part as a function of results of that analysis.

1   5. A method as recited in Claim 4 wherein said mode is selected
2   from mode families, said mode families including an n-color mode
3   family including lossless n-color compression modes, and a BTC-VQ
4   mode family including lossly BTC-VQ compression modes.

1   6. A method as recited in Claim 5 wherein each block with fewer
2   than a predetermined number of distinct colors is assigned to said
3   n-color family.

1   7. A method as recited in Claim 5 wherein said families further
2   include a raw mode family including at least a degenerate raw
3   compression mode in which the current block is transmitted
4   uncompressed.

1   8. A method as recited in Claim 5 wherein said families further
2   include an interpolated mode family including plural interpolation
3   modes.

1   9. A method as recited in Claim 2 wherein said source image is a
2   compound document.

1   10. A method as recited in Claim 1 wherein said function is
2   greedy with respect to a target block size.

1   11. An image compression system comprising:

2   an encoder for sequentially compressing a series of source-image

3   blocks, said encoder implementing plural compression modes with

4   respective predetermined maximum compressed block sizes;

5   a mode selector coupled to said encoder for selecting one of said

6   compression modes for compressing a given one of said source-

7   image blocks, said mode selector selecting one of said compression

8   modes at least in part as a function of a target block size for a

9   current source-image block; and

10   an evaluator for determining the target block size for each of

11   said source-image blocks.

1   12. A system as recited in Claim 11 wherein said evaluator

2   includes a block-size reader for determining the block size of a

3   compressed block resulting from compressing of a respective

4   source-image block, said evaluator determining said target block

5   size in part as a function of the size of said compressed block.

1   13. A system as recited in Claim 12 wherein said mode selector

2   selects a compression mode for a current image block in part as a

3   function of its content.

1   14. A system as recited in Claim 13 wherein said mode selector

2   includes assigns some of said source-image blocks to an n-color

3   mode family of n-color compression modes and other source-image

4   blocks to a BTC-VQ mode family of BTC-VQ compression modes.

1   15. A system as recited in Claim 14 wherein said mode selector

2   assigns some of said source-image blocks to a raw mode family of

3   modes including an uncompressed raw mode.

1   16. A system as recited in Claim 15 wherein said raw mode

2   family also includes truncated raw modes.

1   17. A system as recited in Claim 16 wherein said mode selector

2   assigns some of said source-image blocks to a family of interpolated

3   compression modes.

1   18. An image decompression method comprising:

2   receiving compressed block image data in which some but not all

3   image blocks have been encoded block-truncation coding;

4   for each block, determining from the block data whether or not it

5   has been encoded using block-truncation coding;

6   in the event that a block has been encoded using block-

7   truncation coding, decoding said block using a block-truncation

8   decoding algorithm; and

9   in the event that a block has not been encoded using block-

10   truncation coding, not decoding said block using a block-truncation

11   decoding algorithm.